

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A machine for processing sheets for the production of packagings ~~in materials such as cardboard or plastic~~, comprising

a machine entrance, a machine exit and a processing zone between the entrance and the exit;

a drive driving means (14, 16, 18) capable of driving sheets in a drive direction (F) and at a substantially constant drive speed (V) through ~~[[a]]~~ the processing zone (T) situated between the entrance (E) and the exit (S) of the machine; and

processing apparatus means comprising a first tooling supported by a first rotary support shaft (53, 53') and a counter-tooling (56, 156, 256, 356, 456) ~~respectively borne by a first and supported by a second rotary support shaft, (52, 54), which the first and second shafts extend transversely to the drive direction (F), being and are disposed opposite each other and respectively on either one and the opposite side of the path (P) of the sheets through the processing zone, said the processing apparatus means being designed operable to produce in these sheets at least one of cutouts (22, 28) and/or and folds (24) disposed in the sheets transversely to the drive direction;~~ ~~[[,]] the machine comprising means (UC) for operating apparatus for rotationally driving the rotational drive of the support shafts (52, 54), which means are capable of operating the rotational drive of said support shafts so that, at least at the a moment when the first tooling (53, 53') and the counter-tooling (56, 156, 256, 356, 456) cooperate with a sheet in order to make in it the a transverse cutouts or folds cutout or fold, the first tooling is propelled with rotating at a processing speed~~ ~~[[,]] the having a tangential component (V52) of which is equal to said the drive speed of the sheets [[(L)]]~~, and the counter-tooling is situated opposite ~~this the first tooling~~ ~~[[,]]~~; ~~characterized in that~~

the counter-tooling (56, 156, 256, 356, 456) ~~has~~ having a substantially cylindrical surface having with at least one working strip thereon, the at least one working strip (57, 157, 257, 357, 457) ~~which~~ extends parallel to the a rotation axis of the second support shaft and is radially offset

relative to the portions ~~(58; 159; 359; 459)~~ of said of the cylindrical surface which are adjacent to ~~this~~ the working strip, ~~said~~ the working strip being ~~designed~~ shaped and positioned to cooperate with the first tooling to form at least one of a cutout ~~[[or]]~~ and a fold in a sheet, and ~~in that~~

a motor drive to the first and second support shafts ~~(52, 54)~~ ~~are each driven by a motor~~ ~~(M52, M54), the motor of~~ such that one of the second support ~~shaft being~~ shafts is operated as a slave to the ~~motor~~ other of the first shaft support shafts.

2. (Currently Amended) The machine as claimed in claim 1, ~~characterized in that the~~ surface of the counter-tooling ~~(56; 156; 256; 356; 456)~~ has further comprising a plurality of the working strips ~~(57; 157; 257; 357; 457)~~ spaced angularly apart on the surface of the counter-tooling.

3. (Currently Amended) The machine as claimed in claim 2, ~~characterized in that the~~ surface of the counter-tooling ~~(56; 156; 256; 356; 456)~~ has further comprising a regular alternation of the working strips which are projecting strips ~~(57; 157; 257; 359; 457)~~ from the cylindrical surface and withdrawn strips on the surface of the counter-tooling ~~(58; 159; 259; 357; 459)~~.

4. (Currently Amended) The machine as claimed in ~~any one of claims 1 to 3,~~ ~~characterized in that the width (Lc) of the or of~~ claim 1, wherein each working strip ~~(57; 157; 257; 357; 457)~~ is has a width in the circumferential direction greater than ~~the~~ a width ~~(Lo)~~ of the first tooling, ~~though being approximate to this width.~~

5. (Currently Amended) The machine as claimed in claim 4, ~~characterized in that~~ wherein the width of ~~the or of~~ each working strip ~~(57; 157; 257; 357; 457)~~ lies within the range of 1.05 to 1.8 times the width of the first tooling.

6. (Currently Amended) The machine as claimed in ~~any one of claims 1 to 5,~~
~~characterized in that~~ claim 1, wherein the working strip ~~(157; 257; 357; 457)~~ is mounted
detachably on the counter-tooling ~~(56; 156; 256; 356; 456)~~.

7. (Currently Amended) The machine as claimed in claim 6, further comprising a support
plate supporting ~~characterized in that~~ the surface of the counter-tooling; ~~(356; 456)~~ is borne by a
support plate ~~(360; 460)~~ on which are fixed at least two surface elements on the support plate and
having (359; 459), which define between them, by their mutually opposite axial direction edges
~~(359A; 459A)~~ provided with respective first holding surfaces ~~(359'; 459')~~, defining a receptacle
for each of the working strip ~~(357; 457)~~, the latter being strips between the holding surfaces, the
working strip is capable of being inserted in ~~said~~ the receptacle, and the working strip having[[,]]
on its axial direction edges, and second holding surfaces on the edges of the working strip and
~~(357'; 457')~~ capable of cooperating with ~~said~~ the first holding surfaces.

8. (Currently Amended) The machine as claimed in claim 7, ~~characterized in that~~
wherein the surface elements ~~(359)~~ are themselves fixed detachably on the support plate ~~(360)~~.

9. (Currently Amended) The machine as claimed in ~~any one of claims 1 to 8,~~
~~characterized in that it comprises means (C1, C2, C3)~~ claim 1, further comprising a detector
operable for determining information relating to ~~the~~ a position of a sheet in the processing zone;
~~(T) and in that it comprises~~ a control unit operable (UC) ~~capable~~, as a function of the determined
information relating to the position of a sheet in the processing zone, ~~of~~ for operating the
rotational drive of the first and second support shafts ~~(52; 54)~~ so that, ~~for the~~ during processing of
~~this a~~ sheet, the first tooling ~~(53; 53')~~ is in contact with a predefined region of the sheet and the
first tooling is propelled with a processing speed[[, the]] having a tangential component (V52) ~~of~~
~~which is equal to said~~ the drive speed of the sheet, while (V), whereas the working strip ~~(57; 157;~~
~~257; 357; 457)~~ is so positioned and then operable such that the working strip is in contact with
~~said~~ the defined region of the sheet, but on the other side of the sheet relative to the first tooling.

10. (Currently Amended) The machine as claimed in ~~any one of claims 1 to 9,~~
~~characterized in that the means (UC) for operating the rotational drive of the support shafts are~~
~~capable of operating~~ claim 9, wherein the control unit operates the rotational drive of ~~said the~~
support shafts (52; 54) so that, at least ~~at the moment~~ when the first tooling (53; 53') and the at
least one working strip (57; 157; 257; 357; 457) cooperate with a sheet for the processing of the
sheet latter, the first tooling and the working strip are each propelled ~~with~~ at a processing speed[[,
the]] having a tangential component (V52, V54) of which is equal to said the drive speed (V) of
the sheet.

11. (Currently Amended) The machine as claimed in claim 9 ~~and any one of claims 1 to~~
~~10, characterized in that , wherein~~ the first support shaft (52) is a multi-tooled support shaft
~~capable of bearing supporting~~ at least a first and a second tool (53; 53') which are spaced
angularly apart around the first support; and in that

the control unit (UC) ~~is capable of operating~~ operates the rotational drive of ~~said the~~
multi-tooled support shaft according to a cycle comprising a processing phase ~~performed by the~~
~~first tool~~, in which ~~said the~~ first tool (53) is in contact with a defined first region of a sheet then
situated in the processing zone (T) of the machine and the first tool is propelled with a tangential
speed (V52) equal to the drive speed (V) of ~~this the~~ sheet, followed by a positioning phase[[,]]
~~in the course of~~ which the multi-tooled support shaft (52) is driven ~~so as~~ to place the second tool
(53') in a position to process a defined second region of the sheet, and followed by a processing
phase ~~performed by the second tool~~, in which the second tool (53') is in contact with ~~said the~~
second region and the second tool is propelled with a tangential speed (V52) equal to the drive
speed (V) of the sheet.

12. (Currently Amended) The machine as claimed in ~~either one of claims 2 and 11,~~
~~characterized in that~~ claim 11, wherein there are two of the working strips and the control unit
(UC) ~~is capable of operating~~ operates the drive of the second support shaft (54) so that, in the
course of a cycle, the first and the second ~~tool (53; 53')~~ tools of the first support shaft (52)
cooperate with two separate ones of the working strips.

13. (Currently Amended) The machine as claimed in claim 2 ~~and any one of claims 1 to 12, characterized in that it comprises means (UC) for operating~~ wherein the control unit operates the rotational drive of the support shafts[[,]] ~~which means are~~ and is capable of operating ~~this the~~ drive so that, during the successive processing of a plurality of sheets, the tooling cooperates successively with different ones of the working strips.

14. (New) The machine as claimed in claim 4, wherein the width of each working strip is approximately the width of the first tooling.